

Docket No. 55573 (71526)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

APPLICANT: Mishina, et al.  
SERIAL NO.: 09/786,309                      GROUP: 1635  
FILED: June 6, 2001                      EXAMINER: Nguyen, L  
FOR: HIGHLY EFFICIENT MUTAGENESIS METHOD WITH THE USE OF  
PSORALEN DERIVATIVES

Honorable Commissioner of Patents and Trademarks  
Washington, DC 20231

Sir:

.....

**CERTIFICATE OF FACSIMILE TRANSMISSION**

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being transmitted by facsimile to Group 1600 of the U.S. Patent & Trademark Office by facsimile number 703-872-9306 on December 29, 2001.

By: John B. Alexander

John B. Alexander, Ph.D.

.....

**AMENDMENT**

In response to the Office Action issued on August 29, 2001, Applicants request that the above-identified application be amended as follows.

**IN THE CLAIMS**

Please add new claims 8-22 as follows:

- SUB B1*  
*A2*
8. (new) A mutagenesis method of a gene of a vertebrate animal, comprising the steps of:
- a) treating a germ cell of the vertebrate animal with a psoralen derivative;
  - b) irradiating the germ cell with a high energy beam; and
  - c) subjecting the irradiated germ cell to artificial fertilization to induce mutagenesis in an embryo.
9. (new) A method according to claim 8, wherein the germ cell is sperm.